

INTEROFFICE MEMORANDUM

November 1, 2004

TO: E. Burke

FROM: G. O'Brien

SUBJECT: Determine the projected supportability for SOHO during keyhole periods in 2007.

Summary

SOHO is forecast to receive greater than 85% of the requested time during keyhole coverage in 2007. This is considered a workable percentage which should be handled by the mid-range scheduling office.

Assumptions

The mission requirements used for this study were updated as of 10/21/2004.

The SOHO keyhole periods in 2007 are:

Keyhole 1: 02/16/2007 - 03/09/2007 (Weeks 07-10)

Keyhole 2: 05/19/2007 - 06/04/2007 (Weeks 20-23)

Keyhole 3: 08/15/2007 - 09/06/2007 (Weeks 33-36)

Keyhole 4: 11/16/2007 - 12/01/2007 (Weeks 46-48)

Requirements

The SOHO Keyhole requirements for 2007 are listed in Figure 1.

SOHO

[illegible]

Figure 1 (SOHO Keyhole Requirements)

Methodology

Analysis was performed using the FASTER (Forecasting And Scheduling Tool for Earth-based Resources) forecasting tool with focus on the SOHO keyhole periods in 2007. The projected supportability during each keyhole period is discussed below.

1st Keyhole Period:

SOHO supportability is projected to be between 86 and 97 percent at each subnet in weeks 07 - 10 (Figure 2). This is considered a workable percentage which should be handled by the mid-range scheduling office.

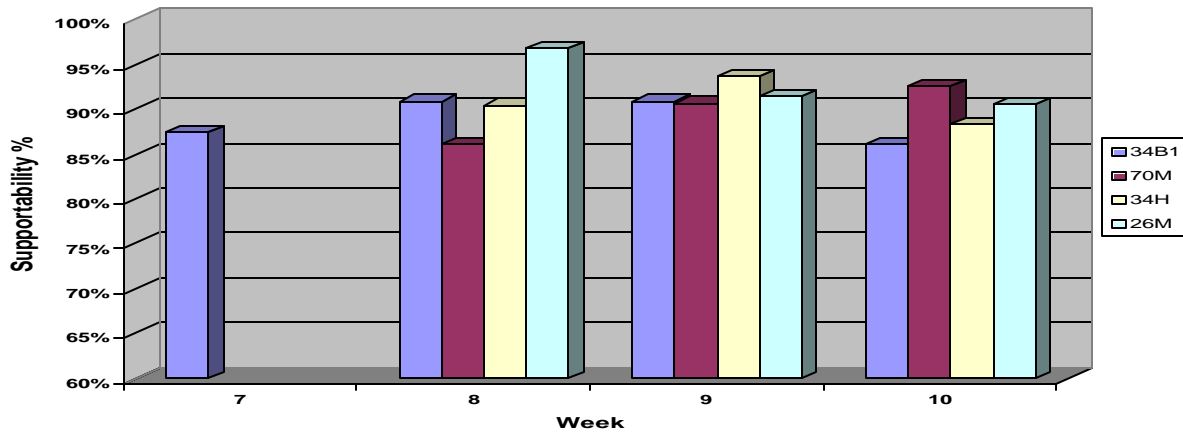


Figure 2 (1st Keyhole Period in 2007)

2nd Keyhole Period:

Supportability is projected to be between 86 and 91 percent in weeks 20-23 (Figure 3).

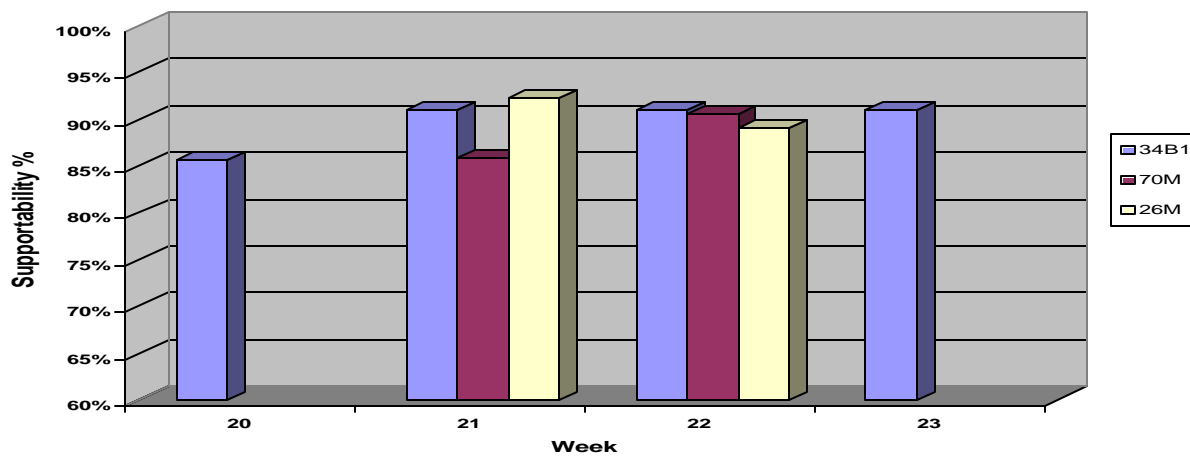


Figure 3 (2nd Keyhole in 2007)

3rd Keyhole Period:

Supportability is projected to be between 85 and 100 percent in weeks 33-36 (Figure 4).

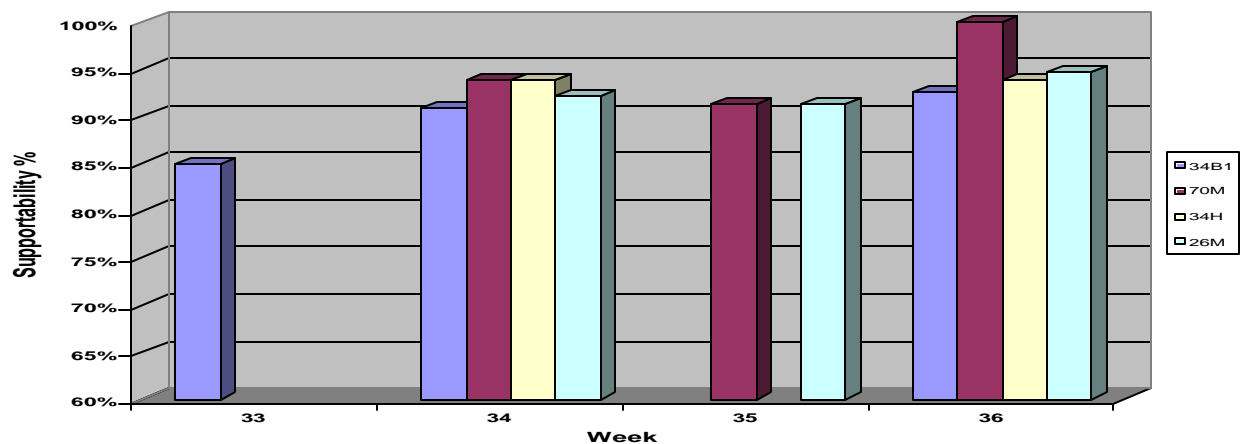


Figure 4 (3rd Keyhole in 2007)

4th Keyhole Period:

Supportability is projected to be between 91 and 100 percent in weeks 46-48 (Figure 5).

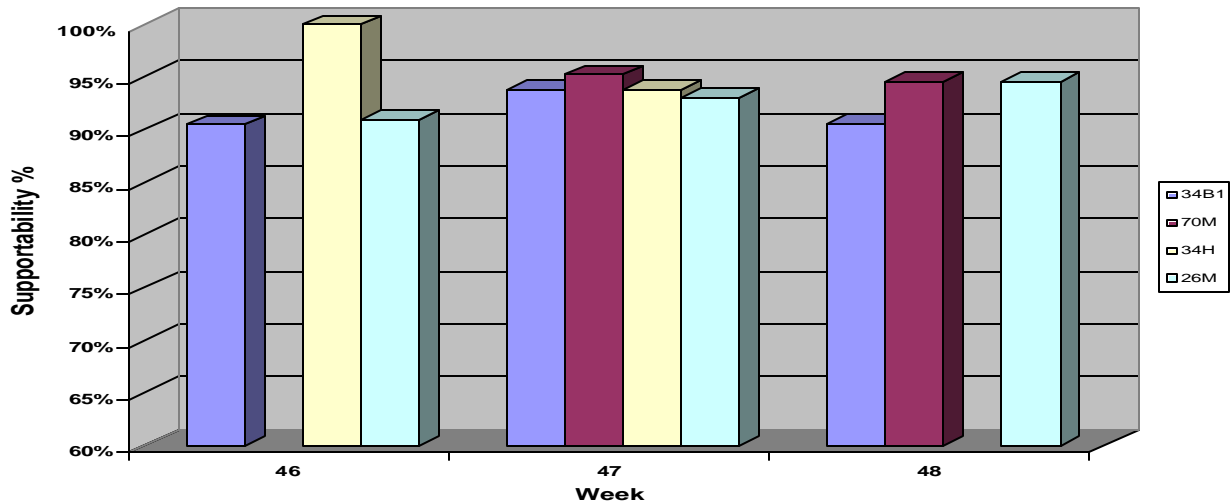


Figure 5 (4th Keyhole in 2007)

Conclusion

Based on current project requirements SOHO is forecasted to have a high level of supportability during keyhole events in 2007. The projected percentages, which exceed 85%, are considered workable and should be handled by the mid-range scheduling office. RAPSO will continue to work with SOHO and other users of the DSN to maximize the time available for each individual user.